

same period, in central Alaska. The distribution of *E. dabanensis* may be extensive, for one specimen came from the neighbourhood of Slana in south Alaska, which is not far from Palmer.

An unfortunate fact must be considered. So far as the available material goes, it is doubtful if *E. dabanensis* and *E. youngi* can be distinguished by their superficial appearance. It is possible that in the future fresh specimens may enable some distinction to be noted. Another trouble is uncertainty concerning the types of *E. youngi*. The type-locality lies in the *dabanensis*-zone of Alaska, so the type-series might include both species, as was the case in the description of the name "*rileyi*". This emphasises the superficial similarity of these species and how essential it is that there is no uncertainty about the actual type, which must be dissected if it is to be of any value. Dr. dos Passos has undertaken to clear up these points; and also whether "*herscheli*" can be distinguished from *E. youngi*.

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Some Aspects of the Fauna of the Nuba Mountains, Sudan

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The Nuba Mountains of southern Kordofan lie between 10° 30' and 12° 30' N, 29° 00' and 31° 00' E. They consist of a series of ranges of large granitic outcrops covered with comparatively shallow soil in the *Acacia*—tall grass forest region of the Sudan (Plate 1a). The general appearance of the landscape is of a vast plain interspersed with large *jebels*. The maximum elevation (Jebel Heiban) is 1,345 m. (4,500 ft.). In the valleys and plains separating these hills there is often dark, heavy soil and the vegetation is predominantly thorny.

The area does not appear to have been investigated zoologically, but is of botanical interest owing to the species flourishing there which really belong to more southern regions. For example, on Jebel Daier the most northerly massif may be found the bamboo *Oxytenanthera abyssinica* Munro and various other trees and shrubs characteristic of the south. Especially striking is the pink-flowered poison-tree *Adenium honghel* A. D.C. and the 'tebelidi' or baobab *Adansonia digitata* L. The large, broad-leaved *Ficus platyphylla* Del. is characteristic of flatter ground; the ebony *Diospyros mespiliformis* Hochst. and *Celtis integrifolia* Lam. near the sandy edges of water-courses. In valleys and on heavier soils, the thorny flora consists of 'talh', *Acacia seyal* Del. with *A. albida* Del. Both tall and short grasses are present, the most important of the former being *Hyparrhenia* spp. The candelabra *Euphorbia calycina* N. E. Br. and the sausage-tree *Stereospermum kunthianum* Cham. are also not uncommon in the area (Andrews, 1948).

As we had not previously visited this part of the Sudan, my wife and I decided to spend the Christmas vacation 1967 there, with our two

younger sons who had come out for the holidays. We drove from Khartoum through Omdurman direct to El Obeid camping the first night just beyond Fattasha. There is much more vegetation west of Omdurman than there is on the east side of the Nile. I think the water-table must be higher. Moreover, termite mounds are common to the west but do not occur so far north on the east bank of the river. Although we had not camped close to a termite mound, the ground was strewn with galleries of *Macrotermes bellicosus* (Smeath.), and I was astounded at the loudness of the hissing sound that these insects made. It was clearly audible from a distance of several metres. The next night was spent among the qoz, north of El Obeid. The road, in fact, is sandy for about 100 miles and we had to use four-wheel drive and low gear-ratio for much of it. Our second night's camping site was visited by five small, short-legged camel-spiders, (Solifugae), *Rhagodessa melanocephala* Simon, including juveniles and a male of unusually reduced size. A normal sized male of this species, previously recorded only from Darfur (Benoit, 1964) was found by me at Kabushiya (Meröe), north of Shendi, in November 1966 (Plate 1b). It measured about 5 cm. in length as compared with 3 cm. for the specimen from near El Obeid.

From El Obeid we drove through Dilling and Kadugli to Talodi where we stayed as guests of Dr. Faysal Ali Saad and Omer Ahmed who entertained us with typical Sudanese hospitality and arranged for us to see a 'kambala' of dancing. The furthest south we went on this trek was Jebel El Liri at the southern extremity of the Nuba Mountains where the terrain levels off north of the 'sudd' region of the Nile. We returned to Khartoum via Er Rahad, Umm Ruwaba, Tendelti and Kosti. At El Liri we met a man who had been mauled by a lion a few months earlier, but we were unlucky and found no game ourselves. At our camp just north of Talodi, however, we saw some bush-babies, *Galago senegalensis* E. Geoffr, by head-lights of the Land Rover. These charming little creatures are very common in the Nuba Mountains. We also saw a dead fox, *Vulpes pallida* (Cretzschmar) on the road, as well as numerous vultures, eagles, hawks, owls and other large birds including one or two ground-hornbills, *Bucorvus abyssinicus* (Boddaert).

The climate of the Nuba Mountains is reputed to be hotter and more humid than it is away from them. Certainly the mountains are high enough to influence the rainfall, especially near Kadugli, Dilling and Talodi. Thus the average annual precipitation at Kadugli is 765 mm. (30 in.) whilst in the region immediately to the west it is only 567 mm. (22 in.) (Lebon, 1965). Climatic data for El Nahud, to the north-west and El Obeid to the north of the Nuba Mountains are as follows:—Mean daily maxima exceed 39°C (102°F) at El Nahud in April and at El Obeid in May. The highest maxima are 42.9°C at El Nahud in April and 46.1°C at El Obeid in August. [The highest temperature ever recorded in Sudan is 52.5°C (126.5°F) at Wadi Halfa on April 29th, 1903]. The mean daily maxima at El Nahud and El Obeid in December are 32.8°C and 31.4°C and the highest maxima 42.9°C and 46.1°C respectively. Mean daily maxima in the two localities in December are 19.2°C and 18.3°C respectively, the lowest minimum at El Nahud being 7.2°C in February and at El Obeid -0.4° in January. [The lowest temperature recorded in the Sudan is -2.0°C (28.5°F) in Wadi Halfa on December 26th, 1917] (Ireland, 1948).

PLATE V.



(a) Granite outcrop and associated vegetation, Nuba Mountains

(b) *Rhagodessa melanocephala* Simon (Solifugae). Male

Photos: J. L. Cloudsley-Thompson.

